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THE NEW PHILADELPHIA GENERAL HOSPITAL

By S. LEWIS ZIEGLER, M. D.

Director of Public Health and Charities

PHILADELPHIA
1915

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Compliments of
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IT GIVES me great pleasure to appear before you this evening and to attempt to diagnose the present condition of Blockley, and, if possible, to suggest a remedy. In this I have had the hearty co-operation of the Staff of the Philadelphia General Hospital, and I will later take occasion to report a brief résumé of their views as expressed in their replies to a letter of inquiry that I addressed to them last week.

Before entering upon a detailed discussion of the plans for the reconstruction of the Philadelphia General Hospital, I desire to briefly consider certain objections that have been made to the immediate granting of an appropriation by City Councils for $1,000,000, notwithstanding the fact that at the last general election this sum was voted by the people for this specific purpose, as a part of the $11,000,000 loan bill.

1. The first objection offered was that our plans were not ready. This we hope to refute tonight by the presentation of well-considered plans. I wish to contend, however, that it is not a correct policy to prepare plans for work that has not been authorized in advance.

2. The second objection is that to appropriate funds before plans and contracts are ready would require the immediate sale of bonds for this purpose and the consequent loss of interest to the city before the work was actually begun. To this I would reply that the law of July 24, 1913, permits this to be done without the loss of one cent by the city. I quote as follows:

> "Be it enacted, &c., That whenever any city of the first class shall be authorized, or shall hereuntofore have been authorized, by the municipal authorities thereof to incur debt on behalf of such city, for the raising of funds for the construction of any public improvement, or for

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(*Read before the Philadelphia County Medical Society, Feb. 10. 1915.)

> other municipal purposes in pursuance thereof, it shall be necessary or proper for such city to execute or enter into a contract or contracts, it may and shall be lawful for the councils of such city to make the necessary appropriation, and for such contract or contracts to be executed and entered into, and work to be done and material to be furnished thereunder, without awaiting the actual issue of the loan or loans so authorized or the receipt by the city of the money to be borrowed; Provided, That the purpose or purposes of such loan shall be, or shall have been, designated in the ordinance directing or permitting the debt to be incurred."

This law wholly eliminates the above contention, as a contract for actual work can be executed before the loan has been issued or the money received by the city, providing an appropriation has been previously authorized by councils.

3. The third objection pertains to the question of whether the old walls should be used or whether entirely new units should be built. This I have endeavored to cover by the expressed views of the Staff and by the submission of a plan that contemplates the remodeling of one old building for an Administration Building and the reconstruction of other buildings for Chronic and Convalescent Wards.

4. The fourth objection raises the obstacle that it will be impossible to take care of the Blockley population while the proposed reconstructive work is being carried on, to which I would reply that before the first of April, 1915, we hope to transfer 1,400 of the Blockley male inmates to the Home for the Indigent at Holmesburg, and during the month of June 250 females will be removed to the Home for the Feeble Minded at Byberry. This will give us ample room to take care of a shifting population, without interfering with the contemplated building operations.

I have no intention whatever of criticising the attitude of Councils toward our appropriation, but simply wish to add a few words to relieve any misapprehension that might exist in their minds as to our position in the matter. As soon as they fully realize that the members of the medical profession are only trying to co-operate with them in their plans to relieve human suffering, and without the slightest intention of playing

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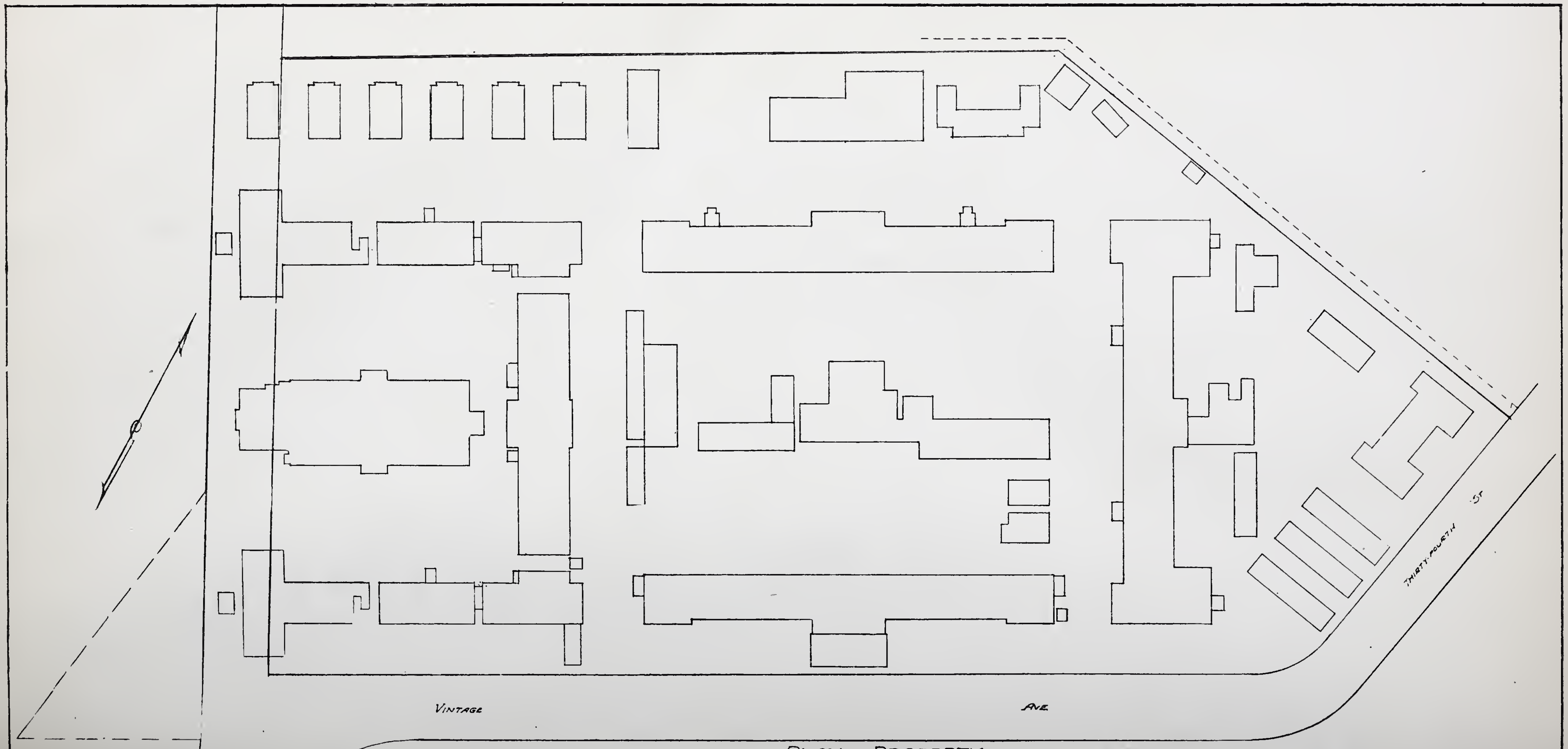


PLAN OF PROPERTY
OF THE
PHILADELPHIA ALMSHOUSE
TWENTY-SEVENTH WARD
SCALE 50' 100'

the deeper "game of politics," I feel sure that a nobler policy of "reciprocal good will" will be formulated and carried out in a most generous manner. When the health of a great city is at stake, every emergency should be met with promptness, liberality and absolute fairness. Human suffering is too sacred a thing to be trifled with.

The hope for a reorganization and reconstruction of the Philadelphia General Hospital has been uppermost in the minds of the medical profession of this city for more than a decade. The impending removal of the former almshouse population to the recently completed Home for the Indigent at Holmesburg has revived this hope.

It requires but a cursory survey of the present Blockley to see how hopelessly inadequate are its accommodations, as compared with the more modern and up-to-date hospitals of other cities, like Boston, New York, Chicago and Cincinnati. They have proceeded to a prompt solution of these important civic problems, while we have lagged behind.

We are confronted with an obsolete plant, constructed in 1838, in which the buildings are poorly lighted, poorly ventilated, overcrowded, provided with inadequate toilet facilities and lacking in the necessary equipment for modern medical and surgical treatment.

The buildings are arranged in the form of a quadrangle (Fig. 1), in the center of which the power plant daily belches forth soot and nauseous gases and furnishes a very inadequate service of heat and light, at a maximum expense to the city because of the enormous coal consumption (amounting to ninety tons per day), which is about twice that needed for an efficient plant of this type. Here is a daily overhead charge that could be so reduced by fuel economy that the cost of a new plant could be canceled within a very few years.

The present laundry handles an average of 120,000 pieces of linen every week, but should not be located in such close relation to the hospital proper. It also emits smoke, but its greatest offense is its unsanitary surroundings, as the isolation wards for measles and whooping cough are located on one side, and the tubercular wards on the other.

The sewer connections and underdrainage of all the buildings require complete revision, as this work has been done from time to time in a manner that can only be characterized as "patchwork."

The buildings themselves appear to have been built with solid foundations and walls, but no attention has been paid to modern sanitary principles. The present wards are nearly double the width of modern hospital construction, and run at right angles to the building, instead of parallel with it. The ceilings are excessively high. The ventilation is very poor. The windows are too few and are wrongly placed. A majority of the wards have but one window, while a few have two or three windows to twenty or thirty beds. This is evidently inadequate. The modern ward usually averages one window to each bed, or at the very least, one window to every two beds, which would mean fifteen to thirty windows to thirty beds. There are but few diet kitchens, and practically no "quiet rooms." No provisions have been made for accessory dark rooms or for treatment rooms, while facilities for electricity, hydrotherapy and other physical treatment of psychopathic and other special cases are practically nil.

The very limited accommodations in the maternity ward are not only totally inadequate for the purpose, but are open to the gravest criticism because the mother and babe must be transferred to the old wards by carrying them through the cold, wintry weather. This inhuman exposure usually occurs one day after birth, because pressure demands that the next patient must be promptly provided for. This can easily be remedied by constructing glass cubicles in the wards themselves or by locating the cubicles in a room that is adjacent thereto. The present maternity pavilion should then be removed and the site utilized for the much-needed addition to the Nurses' Home.

The kitchen and bakeshop are also inadequate for the demands made upon them, and the distribution of food is of necessity so slow that it becomes chilled before reaching the patient.

The present laboratory, with its small mortuary, is so insignificant that it is hardly worth mentioning, except to call attention to its complete inadequacy. No other city of the first class has so insignificant an adjunct to its Department of Public Health. The present European cataclysm will throw on American medicine the onus of leading in research work and scientific development. But how can this possibly be effected at this important medical Mecca without the prompt erection of a great pathological laboratory?

The Staff of the Hospital justly complain that there are too few internes and nurses, and that the ambulance service is greatly crippled by the limited number of motor ambulances, which are of an obsolete type requiring constant repairs.

As nearly as possible, I will now endeavor to epitomize the somewhat diverse views expressed by the various members of the Staff, stating first the query that elicited these expressions of opinion.

1. Q. Do you favor reconstruction of the present wards or the building of new ones?

A. Only eight favored reconstruction of the old buildings; all the others endorsed the building of new units.

2. Q. If the old buildings are used, do you prefer a central corridor, with wards on each side, or a single ward, with a side corridor, as at present?

A. The majority of opinions favored the central corridor, while many preferred the present arrangement of corridor on the side.

3. Q. If new units are built, could the old wards be used for convalescents?

A. The majority favored the use of old buildings for chronic and convalescent cases.

4. Q. How many patients should be placed in one ward?

A. About one-third of the Staff considered thirty patients enough for one ward. Many did not answer. Others varied from fifteen to fifty patients in each ward, depending on whether these were acute or chronic cases.

5. Q. Can more than thirty patients be handled efficiently, and how many nurses do you think will be required for each ward?

A. This query was answered somewhat vaguely. Three to six nurses were considered ample for each ward.

6. Q. If new buildings are recommended, how many stories high should these be built?

A. Opinions ranged from one story to seven, the average favoring about four stories.

7. Q. How far apart should the ward units be located?

A. A distance equal to the height of each unit, so as to avoid overcasting shadows.

8. Q. Do you favor a roof garden?

A. The majority favored a roof garden.

9. Q. Do you favor a solarium?

A. Nearly all endorsed the idea of a solarium.

10. Q. How many "quiet rooms" are needed?

A. One to four "quiet rooms" were recommended.

11. Q. Should there be a small laboratory in each ward for examination of urine, sputum, blood and smears?

A. Some favored a small laboratory in each ward, while many preferred one laboratory to each double unit (eight wards), the more important work to be sent to the main laboratory.

12. Q. Should there be a diet kitchen?

A. A diet kitchen was universally approved.

13. Q. Is a small dining room needed for ambulant patients?

A. The small dining room was favored by some, while others thought that a room in the basement could be more easily served.

14. Q. Do you think any other rooms are needed?

A. Opinion did not crystallize on this subject.

15. Q. Should forced draft ventilation be installed?

A. Some favored such an installation for the ventilation of operating rooms during the use of ether, or for the old buildings.

16. Q. How many large amphitheaters are needed for clinical teaching?

A. One to four large amphitheaters.

17. Q. How many small amphitheaters are needed for ward classes?

A. Four to twelve smaller amphitheaters.

18. Q. Should these be located on the ground floor, so as to be accessible to students?

A. Location is immaterial, but the ground floor is probably better for students.

19. Q. Would you provide a covered corridor or a subway, or both, for rapid communication between the various buildings?

A. The majority favored both the corridor and the subway.

20. Q. Should the attendants for each unit be housed in the upper story of the building they work in, or should a separate unit be built to house them?

A. Most favored a separate unit, but many thought it better to house the domestic force where they work.

21. Q. What other features would you suggest?

A. Novel suggestions were few. One or two asked for private rooms.

22. Q. Outline any special features required in your own department?

A. New ideas were limited, except for the psycopathic wards.

23. Q. Should the wards extend to the north and south, or to the east and west?

A. The majority favored locating the wards north and south; some said east and west, and a few did not understand, or at least did not answer.

24. Q. Should an isolation pavilion be built, and of what capacity?

A. All favored isolation, but did not particularize as to size of ward.

25. Q. How large a laboratory building is needed?

A. Few opinions were expressed, except that it should be ample for the work.

26. Q. What should this building contain?

A. Pathologic, bacteriologic, physiologic, serologic, X-ray, photography, working library, mortuary, etc.

27. Q. Do you think the City Morgue should be located in the laboratory?

A. Good idea, but not essential.

28. Q. Where would you locate the power plant?

A. Should be located in the five-acre lot next to the railroad siding.

29. Q. Should the power plant and the laundry be combined together as one unit?

A. Combined or in juxtaposition. Many left the query unanswered.

30. Q. Would you locate the library in the laboratory or in the administration building?

A. Opinions were about equally divided. Some favored placing the large library in the administration building, because maternity and surgical internes should not visit the laboratory; but they also favored locating a small working library in the laboratory building.

31. Q. One million dollars has been appropriated. This amount will build either (a), (b) or (c), and no more:

(a) The laboratory and one large hospital unit.
(b) The laboratory, a power plant and laundry.
(c) One hospital unit, a power plant and laundry.

State which combination you think should be built first?

A. The majority voted for (a) laboratory and one double hospital unit; the second choice was (b) laboratory, power plant and laundry, while the third choice was (c) one hospital unit, power plant and laundry.

32. Q. Do you favor the present location for a city hospital?

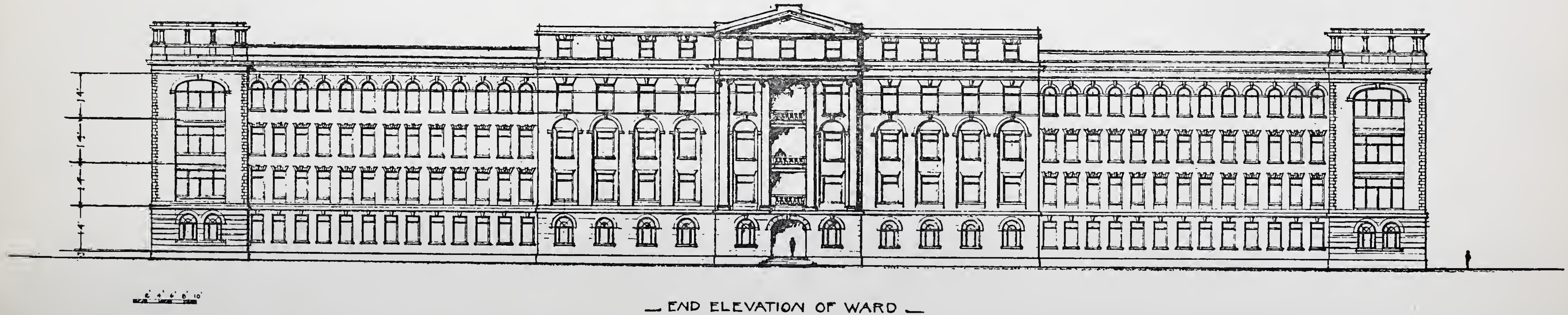
A. Favored by the majority.

33. Q. Do you favor one large hospital, with a centralized administration?

A. Vote the same.

34. Q. Do you favor divided units scattered over various sections of the city?

A. Only five voted in favor of this proposal.



— END ELEVATION OF WARD —

FIG. 2

35. Q. Should each of these units be a general hospital or a special hospital?

A. Only a few expressed any opinion—about equally divided.

36. Q. Should the service of the General Hospital be confined to acute cases, to chronic cases, or to both varieties, as at present?

A. The majority favored the present arrangement for both acute and chronic cases.

37. Q. Should the tuberculous wards be moved to a different plot of ground?

A. The great majority favored complete removal; a few wanted a single unit retained.

38. Q. Should outpatient clinics be established for each department?

A. Favored by a few, but opposed by many.

39. Q. Do you favor motor or horse driven ambulances?

A. All favored motor ambulances in larger numbers than at present. Some wanted one or two horse-driven ambulances.

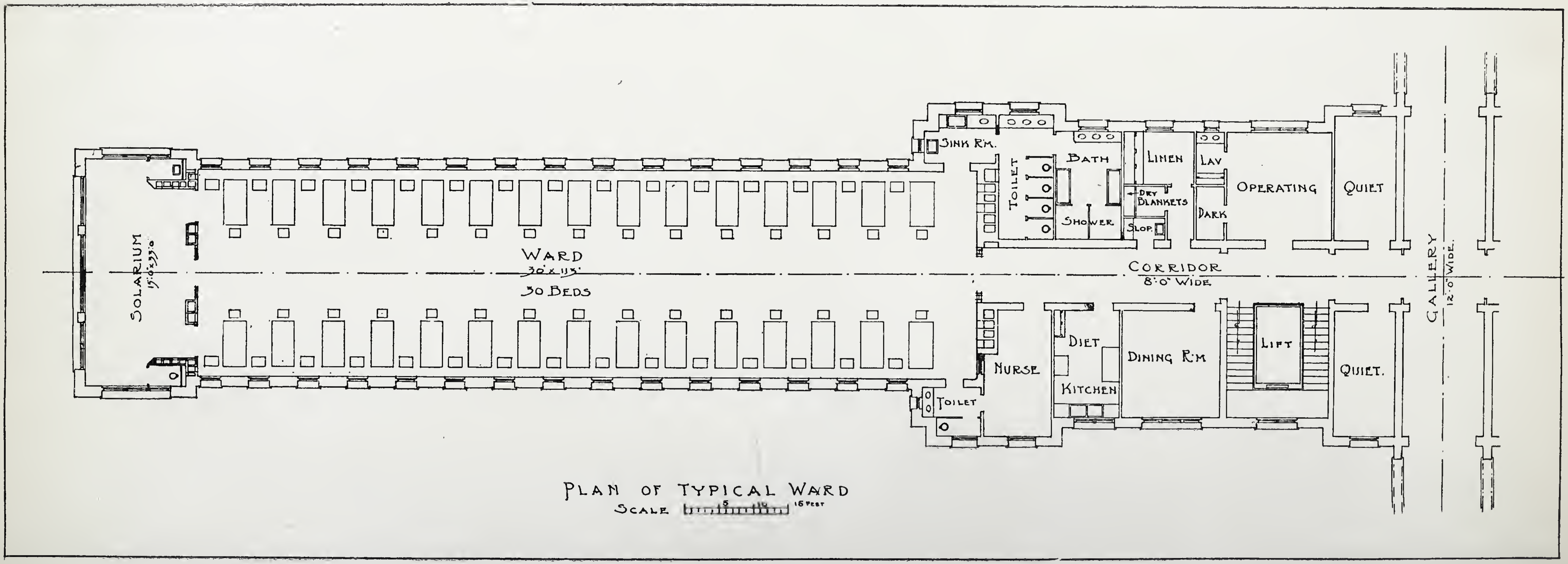
In considering the question of the hospital ward unit, I will not attempt to discuss the pros and cons of the various types, but will simply recommend the double unit with an open air interspace, an end solarium and a roof garden that is partly open and partly protected. This type of unit is well developed in the Virchow Krankenhaus, of Berlin, which, however, is only a single-story pavilion. I prefer, however, a modification of the Cincinnati unit, so elaborately planned by Dr. Christian R. Holmes, but doubled and capped by a service crown, as shown in Fig. 2.

As an elevator is absolutely necessary for efficiency, I believe that a four-story building, with basement and roof garden, is the most efficient type. The head of each wing should be provided with an elevator large enough to easily carry a bed and several attendants. This will provide two elevators to each unit, so as to meet the emergency if one elevator should break down. The elevator shaft should be surrounded with a fireproof stairway. Narrow fireproof stairs may also be constructed in the solarium, where a water closet should be installed for emergencies. The ward windows should be provided with hopper transoms. Either one bed to each window or two beds to each window may be arranged. The former sometimes gives too much light and air, but is otherwise most desirable. The doctor's washroom, the nurses' observation room, the tiled examination and treatment room, the dark room for ophthalmoscopic and cystoscopic work, the two quiet rooms, the diet kitchen, a small dining room, the slop room, the toilet room, the bathroom, the enemata room and blanket warmer and the linen supply room are all necessary (Fig. 3). Clothes chutes are destructive and insanitary. Soiled linen should be carried down on the elevator every day and sent directly to the laundry.

The corps of attendants and other help attached to each double unit should be housed in the elevated service crown which covers the head of each ward. This is more efficient and preserves better discipline than when they are all housed in a separate building. Some, however, will be housed in the dormitory of the kitchen unit. A small laboratory for urine, blood and smears should be provided here. One is sufficient for the eight wards below. A small reading room should be arranged for the domestics and ward attendants.

A large dining room for ambulant patients will be practicable in the basement. The vacuum plant, the storage lockers for patients' clothes and other necessary paraphernalia can also be arranged for in the basement. Special baths can be given here.

All the units will be connected by a double-decked corridor on the level of the first and second floors. The basement will have a long, continuous tunnel, which will carry wires and pipes for heat, cold storage, ice water, etc. Food will be conveyed from a central kitchen through this communicating subway to all the units and carried directly to each ward on the elevator. The food carriages will be propelled by storage batteries, and each tray will retain the temperature in a fireless cooker. This will permit a hot meal to be served to every ward of the hospital in less than fifteen minutes.



PLAN OF TYPICAL WARD

FIG. 3

The central unit will have well-tiled storerooms for food in the basement with cold storage rooms, a sanitary kitchen on the first floor and a large dormitory for miscellaneous help on the other floors. The bakery will be located near the laundry. A central supply room will be established, with an advance agent, known as "the supply agent," who will visit wards each day, record all requisitions for supplies and check off their issuance. This will relieve a long-standing complaint.

The power house will be located on a spur of the high grade freight line of the Pennsylvania Railroad, so that the cars can be run up on a trestle and emptied directly into second-story coal bins, from whence the coal will be fed through pipes to automatic stoking furnaces, and the ash debris carried away by automatic scuttles that will empty into ash carts or into cars that will run in on a lower level from the P. W. & B. R. R. This arrangement will minimize labor and make the furnaces as nearly automatic as is possible.

The laundry should communicate with all buildings through the subway, so that clean and soiled linen can be quickly transferred. It should have a basement for sorting linen and a building four stories above this for the laundry proper, so that the work may be classified and systematized from the standpoint of efficiency and economy.

The garage should be located on the same plot of ground and have provision for eight motor ambulances, two motor trucks, two horse ambulances, one auto fire engine and one hose cart. Additional space should be provided for future extensions of this service.

The first ward unit should be a receiving ward, where all patients should be registered, bathed, their clothing disinfected, and distributed to their proper classification. Between the first two units, on the ground floor, should be placed two or three large amphitheaters, with a capacity of about 300, and at least four smaller amphitheaters, holding from 50 to 100, for ward class demonstrations, and minor operating rooms. These can be arranged for easy access by students either along the connecting corridor or in the intervals between the ward units.

The laboratory should be placed near the present location. The basement should be devoted to the mortuary, and, if possible to persuade the city fathers to transfer the City Morgue to this building, additional facilities for pathological demonstrations will be provided. On the remaining four floors should be placed the X-ray laboratory and photographic darkrooms, the chemical, electric, serologic, physiologic, pathologic, bacteriologic and other research laboratories that are so necessary a part of this equipment. A working library is also required.

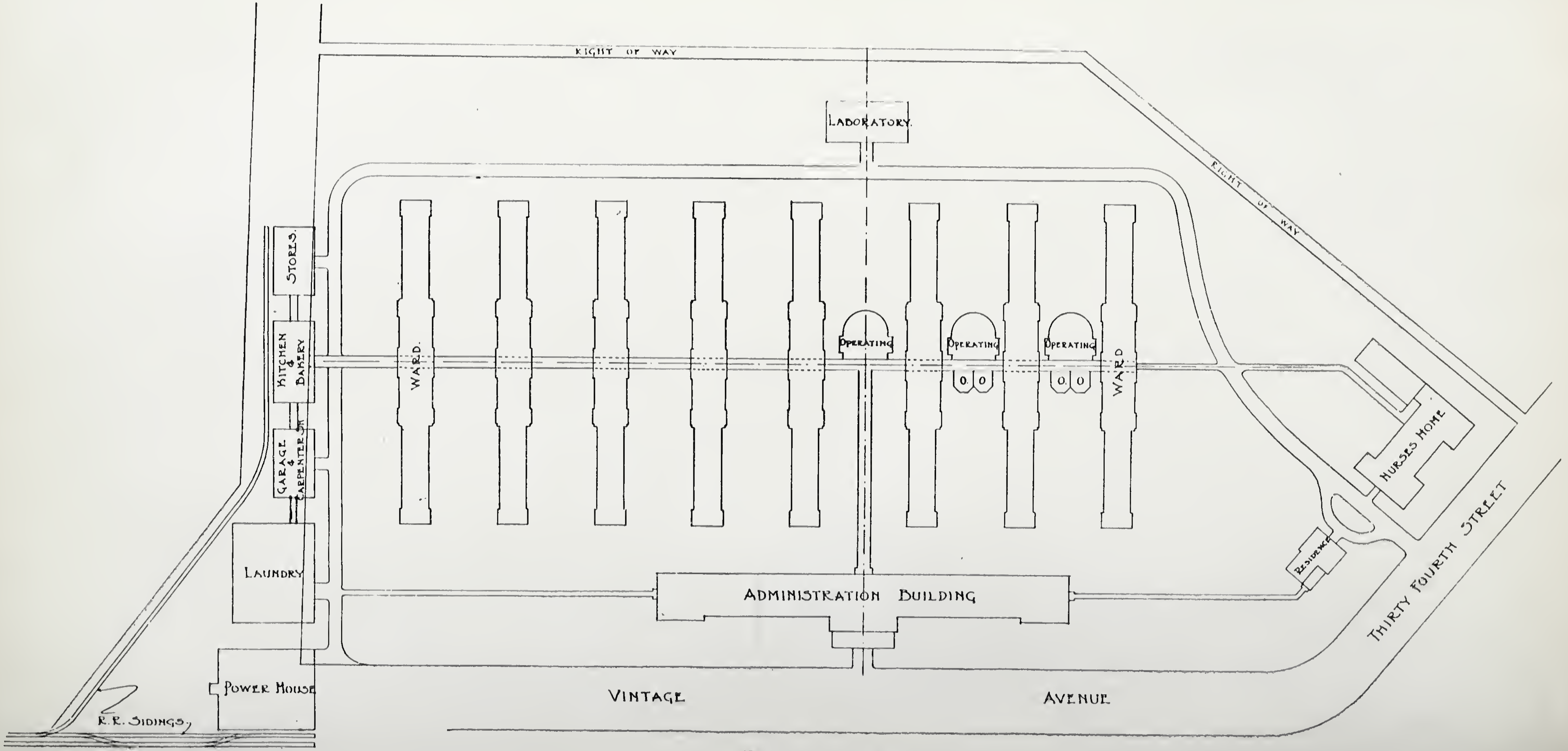
The psychopathic wards should be divided into smaller compartments for better classification and observation. They should have a visitor's room under a competent attendant, and should have ample facilities for the administration of hydrotherapy, electricity, massage and mechano-therapy.

The maternity wards should be well provided with glass cubicles for aseptic obstetrical work, in which the patient can be isolated and the mechanism of labor observed by students in the corridor between the cubicles, without conveying infection to the patient or hampering the obstetrician. The doctor, nurse and patient will enter the cubicle from a rear corridor, as in the hospitals of Vienna.

The isolation wards should have a similar sanitary arrangement in the form of aseptic glass cubicles. This permits every cubicle to be depended on as a strictly non-contagious unit, easily disinfected, and adapted to any contagious disease.

The public policy of State care for the insane will gradually remove from our midst the inmates of the Insane Department, and thus free our grounds for the future development of our plans. (Twenty-four insane patients were removed to Wernersville last month.) There will ultimately be room for eight double units, which will house about 2,000 patients. (Fig. 4.).

I have endeavored to describe only a few essentials in hospital details, for it would be manifestly impossible to cover all the minutiæ within the brief period of time assigned to me. I have been collecting such material for many years, paying especial attention to the newer hospital development going on in Germany. The great Virchow Krankenhaus, in Berlin, has



BLOCK PLAN

SCALE 20' 40' 60' 80' 100'

twenty-seven double units of the one-story pavilion type, but no connecting corridor or subway; consequently the gynecological patient requiring treatment of the eye must put a shawl over her head and run through the cold to the eye pavilion. I think, however, that the double unit tends toward efficiency in administration.

The new hospital at Frankfort-on-the-Main is splendidly equipped in its special wards, and there is a better interrelation of the units. The new University of Frankfort was inaugurated by the Kaiser at about the time the present war began.

The University of Giessen is also building a fine series of hospital units covering each department of medicine.

The Cincinnati City Hospital has developed a fine ward unit, although one might criticise the lavish construction and necessarily expensive upkeep.

I recently visited the new Bellevue Hospital, of New York, and saw the result of an expenditure of more than $12,000,000. I think our problem can be handled more simply and more economically, but they have a splendid basic plant that can never deteriorate. The laboratory cost nearly one million dolars. It contains the City Morgue in its basement. It is a splendid structure, finely equipped and well fitted for its purpose.

I was glad to see that fine sanitary quarters and bathing facilities had been provided for its internes, who now number nearly eighty. These young men devote their services to the relief of the suffering poor of the city, without recompense, and at least deserve healthful quarters in which to live. I have requested councils to grant a special fund to rehabilitate this part of our present Blockley in the very near future.

The question of one single central organization has been solved by Bellevue in a truly magnificent manner. They are working out their own salvation absolutely free from all political control and with the single purpose of performing a great civic duty by the organizing of an efficient administration.

Finally, we must consider the problem of the future. Shall Blockley continue to be a great civic institution, whose teachings are known throughout the land, or will you break it up into units and scatter it over the four quarters of the city, at an increase of more than 100 per cent. in the expense of its administration and a decrease of more than 50 per cent. in its efficiency? As now constituted, it fills a unique want. It has within itself the units of every department of medicine, and thus illustrates the facetious definition of civilization which Dr. Hill, the recent Ambassador to Germany, once enunciated. He said: "Civilization is the unification of interests through the complexity of interdependencies." The unification of these divergent interests is what has given Blockley its medical reputation. I feel fortunate in being supported in this view by the great majority of the Hospital Staff, as only five members favor the idea of scattered units. Centralization is the order of the day. Moreover, rapid transit and motor ambulances have solved the problem of location. As Dr. Holmes has said, it matters not where a hospital is located in a city of the first class.

As to a change of location: We could not secure a site of equal dimensions in any more central location unless we squandered millions, nor could we dispose of the present site at anything like its proper value. Besides, there is the old Blockley sentiment that binds us to our present location. The men who have worked there for years should know, and they do not want to trade their present birthright for a prospective "mess of pottage."

If any one should favor small receiving wards or emergency units for the detention and study of patients during a period of twenty-four hours, this might be worthy of some consideration; but even this addition to the city's equipment would add considerable expense to the annual budget of the Department of Public Health and Charities.

In closing, I can only add that I hope the present agitation will so crystallize public sentiment that we may not only receive the present appropriation for $1,000,000 and be able to promptly start the reconstruction of this great hospital, but that all the citizens—and this includes our friends of every political faith—may give that unanimous support to the creation of a new Philadelphia General Hospital that will not only relieve the suffering poor of this great city, but will also redound to the glory of American medicine, of which this institution has long been a shining light.